

CLAIMS

1 .A method for receiving a CDMA signal,
comprising an operation of correlation with appropriate
pseudo-random sequences, an operation of
synchronization for locating data in the correlation
5 signal obtained, and an operation of retrieving data,
this method being characterized in that the
synchronization operation implements double delayed
multiplication of the sampled correlation signal by
performing a first delayed multiplication consisting in
10 multiplying a sample of the correlation signal by the
conjugate preceding sample (50, 52, 54), then a second
delayed multiplication consisting in multiplying a
sample of the signal thus obtained by the conjugate
preceding sample of said signal obtained (60, 62, 64).

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2. The method according to claim 1, wherein a
maximum of the signal obtained through double delayed
multiplication (66, 68) is searched for, and a
synchronization signal (S) corresponding to said
20 maximum is delivered.

3. The method according to claim 2, wherein an
average is calculated of two successive maximum values
obtained before the synchronization signal is
25 generated.

4. The method according to claim 4, wherein, the
correlation signal being a complex signal with a real
component I_k and an imaginary component Q_k , the signal

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obtained after the first delayed multiplication is in turn complex having a real component ($\text{DOT}^{(1)}_k$) and an imaginary component ($\text{CROSS}^{(1)}_k$):

- for performing the first delayed multiplication,
5 the quantity $I_k I_{k-1} + Q_k Q_{k-1}$ is calculated, supplying the real component ($\text{DOT}^{(1)}_k$) of the new signal, the quantity $Q_n I_{n-1} - I_n Q_{n-1}$ is calculated, supplying the component ($\text{CROSS}_k^{(1)}$) of the new signal,

- for performing the second delayed
10 multiplication, the quantity $(\text{DOT}_k^{(1)}) (\text{DOT}^{(1)}_{k-1}) + (\text{CROSS}^{(1)}_k) (\text{CROSS}^{(1)}_{k-1})$ is calculated, giving the real component ($\text{DOT}^{(2)}_k$) of the final signal, and the quantity $(\text{DOT}^{(1)}_{k-1}) (\text{CROSS}^{(1)}_k) - (\text{DOT}_k) (\text{CROSS}^{(1)}_{k-1})$ is calculated, giving the imaginary component
15 ($\text{CROSS}^{(2)}_k$) of the final signal.

5. A CDMA signal receiver for implementing the method according to claim 1, this receiver comprising:

- correlation means ($10(I)$, $10(Q)$) functioning
20 with appropriate pseudo-random sequences, and delivering a sampled correlation signal,

- synchronization means (16) for delivering a synchronization signal (S) localizing data within the correlation signal,

25 - decoding means (16) for retrieving the data (D),
this receiver being characterized in that the synchronization means is a double delayed multiplication means of the sampled correlation signal comprising means (50, 52, 54), (60, 62, 64) capable of
30 performing a first delayed multiplication consisting in multiplying a sample of the correlation signal by the

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conjugate preceding sample, then a second delayed multiplication consisting in multiplying a sample of the signal thus obtained by the conjugate preceding sample of said signal obtained.

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